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UNDER THE CHARGE OF

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The Treatment of Insomnia.—The most important discussion, from the therapeutic stand-point, at the Montreal meeting of the British Medical Association was upon this subject.

DR. C. K. CLARKE adopts Sée's classification of insomnia: as (1) dolorous; (2) digestive; (3) cardiac and dyspnœal; (4) cerebro-spinal and neurotic; (5) psychic; (6) of physical fatigue; (7) genito-urinary; (8) febrile and autotoxic; and, finally (9), toxic. Of these the cerebro-spinal and neurotic insomnias were chiefly presented. Here there is little hope from the protracted administration of hypnotics, sedatives, and narcotics; but, on the contrary, we might look for results the opposite of satisfactory. Under some conditions it may be necessary to adopt the routine administration of hypnotics, not only with the hope of cure, but also as a means of keeping a restless patient quiet. Yet without drugs and by simple physical means it is easy in many cases to restore normal arterial tension and cause sleep. In the insomnia of acute mania the warm bath is often of the greatest value. Usually water is used at a temperature not exceeding 104° F., and this is continued for twenty minutes or more while cold applications are made to the head. This temperature is safer than that of 110° F., as advised by some authors, and there is less danger of producing collapse, a danger never absent in a case of mania. Of course, the warm bath is contra-indicated when heart-failure is threatened or when organic heart trouble is present. Sometimes the time-honored cup of hot milk at bedtime induces the sleep habit, and when a stimulant is indicated a hot toddy is oftentimes worth a dozen doses of chloral or its equivalent. Insomnia occurring in neurasthenia is possibly one of the most difficult and unsatisfactory forms to deal with, but a study of the arterial pressure at the radial pulse will invariably show that in this condition the pressure is lowered. If the feeble heart is strengthened with digitalis, sleep is possible. In many cases one can substitute the dynamic agents, massage, frictions, douches, and transfusions, and at the same time caffeine and digitalis can be employed. For those who are driven to do their thinking in bed, a glass of hot milk on retiring or a half-pint of bitter ale answers every purpose. Change of air is extremely valuable, and for most persons of a nervous type an outing under canvas in the northern woods of Canada is a sleep producer of the most remarkable kind. Certainly simple methods should be tried before drug treatment is decided upon.

DR. REYNOLD WEBB WILCOX prefaced his remarks by the statement that the treatment of insomnia is the treatment of a symptom. The disease of which insomnia is a symptom should be sought out and treated; in this way many and diversely-acting drugs were indirect hypnotics. He denied that organic brain disease was caused by insomnia, but rather that this symptom demanded an effort to seek out obscure brain affections. When all had been accomplished by hygienic and physical measures which was possible, there yet remained an important place which drugs and drugs alone could occupy. Routine prescribing is utterly indefensible; equally so is the reckless administration of drugs. Insensibility is not sleep. The smallest amount, and that of the most harmless drug should be selected. We desire sleep-persuading not sleep-compelling drugs. In ascertaining the mode of action he reviewed the physiology of sleep, noting the various chemical and physical theories which have been advanced. The theory of Howell explains chiefly the good effect of hot baths, but aids little the theory of drug action.

The theory of the neuron of Rabl-Rückhard, taken in connection with the observations of Hodge and the work of Ramon y Cajal, gives the best working hypothesis for pharmacological investigation. Quoting Dercum, that sleep is explained as follows: "The cortical cells in the motor area have processes extending toward the surface—dendrites—and a protoplasmic process extending downward through the white matter of the brain, internal capsule, the crus, the pons, the medulla, and into the spinal cord, where it terminates in a brush-like extremity—the end tuft. Here it has a certain relation to the motor cells in the anterior horn of the cord—probably one of contact, though this is not definitely known. If the nerve-cells retract this contact is broken; if the abnormal contraction of the nerve-process is relieved for the time being, contact once more takes place." Evidently, if the neurons are functionally active, their dendritic processes must be in contact; without this consciousness is impossible. When the nerve-cells are exhausted by fatigue, there is every reason to believe that their volume shrinks, and it is, therefore, more and more difficult for them to remain in contact. When relaxation comes, the processes retract and unconsciousness—that is, sleep—supervenes. The action of drugs is probably to induce this severance of contact, and the studies made upon alcoholic radicles and chlorine compounds are cited, the depressing effects of these and their neutralization by amide radicles being set forth. Of individual drugs, he believed that opium and its alkaloids should be excluded from our list of hypnotics, because of their various dangers, and those who persisted in their use showed a paucity of therapeutic resource not warranted at the present time. The hyoscyamus derivatives appeared to be useful in the insomnia of the insane, but in daily practice were not to be chosen for obvious reasons. Of the oxygen derivatives of the hydrocarbons, amylene hydrate and methylal were of limited use and untrustworthy. Paraldehyde was useful, but habit is formed in spite of the abominable odor which it gives to the breath; cases of delirium tremens from its use have been reported. Chloral was popular, but habit was readily formed, and its use was attended by dangerous and even fatal results which were frequently not to be foreseen. Chloralamide was almost absolutely safe and by far the best of the chloral derivatives. Chloralose had given rise to serious depression. Hypnal and hypnone were entirely untrustworthy. Of the sulphur derivatives of the hydrocarbons sulphonal was often delayed in its action, and fatal cases had occurred. He cited the cases of hæmatoporphyrinuria, presenting the symptoms of abdominal pain and vomiting, with fatal collapse. The exanthemata were common. In view of the indiscriminate use of this drug by the laity, he believed that its use by the profession should be discouraged. Trional is a far better remedy than sulphonal, although from this exanthemata are frequently seen. It is more rapid in its action, and the danger of hæmatoporphyrinuria more remote. By giving alkaline mineral waters during its administration, and omitting it for two nights each week, it did not so readily lower nutrition. Tetronal presents no advantages over trional. Of the urethanes, ethyl urethane, commonly known as urethane, is useful as a mild hypnotic and when a change is necessary. Chloral urethane, known as ural, as well as its alcoholic solution, somnal, presents all the disadvantages and none of the advantages of the substances of which it is composed. It is probably a mixture and not a chemical compound. Of the remedies from the vegetable kingdom he cited but one as a valuable hypnotic, and that could be used hypodermatically. That is pellotine, from the Anhalonium Williamsii, a Mexican cactus. In dose of one-half grain it gave quiet sleep of satisfactory duration. Discarding unsafe and unreliable and unsatisfactory drugs, he compares four, as follows: (1) Potency: paraldehyde, chloralamide, pellotine, trional. (2) Rapidity: pellotine, paraldehyde, chloralamide, trional. (3) Duration: trional (longest), chloralamide, pellotine, paraldehyde. (4) Habituation: pellotine (slight), trional, chloralamide, paraldehyde (considerable). (5) Safety: chloralamide, pellotine, paraldehyde, trional. By using these drugs judiciously, in no department of therapeutics can we add so much to the comfort and well-being of our patients. On the other hand, in scarcely another can we so readily lay the foundations for temporary inconvenience and lasting detriment.

MR. ALEXANDER MCPHEDRAN presented the contraindications and ill effects of hypnotics. From the bromides we have, in addition to the general cachexia, with loss of appetite, disturbed digestion, anæmia, loss of memory, mental apathy, and commencing paralysis and trembling of the extremities that may be developed from their immoderate use. There may also occur marked mental aberration and alarming homicidal tendencies. Sulphonal, even in moderate doses, may give rise to fatal results. Trional may produce various disturbances of consciousness, speech, and hearing, and of vision, loss of memory, and ataxia of movements in general. Paraldehyde has been followed by serious effects, great dyspnœa and collapse, marked delirium, with paresis of the functions in general, and the formation of a habit has been observed.—*British Medical Journal*, 1897, No. 1918, p. 853.